UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

February 13, 2009

Michael Adackapara
Division Chief
Santa Ana Regional Water Quality Control Board
3737 Main Street, Suite 500
Riverside, CA 92501-3348

Re: Draft MS4 Permit for Orange County and Incorporated Cities within Orange County (NPDES Permit No. CAS618030)

Dear Mr. Adackapara:

The following are EPA Region 9's comments on the November 10, 2008 "First Draft" of the renewed Areawide Urban Stormwater Permit for Orange County and incorporated cities within Orange County within the jurisdiction of the Santa Ana Regional Water Quality Control Board.

EPA is generally supportive of the approach taken by the Santa Ana Regional Board in the draft permit. The following comments are informed by our review of other Municipal Separate Storm Sewer System (MS4) permits throughout our Region, and our review of the implementation of these permits via audits of nearly 50 MS4 programs.

The renewed Orange County MS4 permit will be the fourth permit issued for these municipal stormwater discharges. It is appropriate for the permit provisions to evolve based on lessons learned from past permits. The renewed permit is an opportunity to include clear permit provisions that support water quality benefits. Our comments concern two aspects of the draft permit.

1. Implementation of Low Impact Development (LID) Requirements

EPA agrees with the draft permit's approach for incorporating LID techniques, also known as green infrastructure. On a national level, EPA is advocating LID as an approach to stormwater management that is cost-effective, sustainable, and environmentally-sound. Ongoing efforts to promote the use of these techniques are described in EPA's January 2008 Action Strategy for Managing Wet Weather with Green Infrastructure. Materials regarding EPA's policies in this area can be found at: http://cfpub.epa.gov/npdes/greeninfrastructure/information.cfm#greenpolicy.

On page 20 of 89 of the draft permit, Finding #62 states, "The USEPA has determined that by limiting the effective impervious area of a development site to 5% or less, downstream impacts can be minimized." While it is true that EPA agrees that limiting effective impervious area (EIA) to 5% or less will have positive impacts on water quality,

EPA has not made a determination that the 5% EIA concept is necessarily the only or always the best method to implement LID. We recommend replacing Finding #62 with the following:

> "USEPA has determined that LID/green infrastructure can be a cost-effective and environmentally preferable approach for the control of stormwater pollution that will minimize downstream impacts by limiting the effective impervious area of development. LID and the reduction of impervious areas may achieve multiple environmental and economic benefits in addition to reducing downstream water quality impacts, such as enhanced water supplies, cleaner air, reduced urban temperatures, increased energy efficiency and other community benefits such as aesthetics, recreation, and wildlife areas. EPA has reviewed studies[1] that have evaluated the % EIA concept and we believe that it is a reasonable and effective metric for incorporating LID principles into stormwater permits."

EPA's primary objective for incorporating LID into renewed MS4 permits, especially for those representing the fourth generation of permits regulating these discharges, is that the permit must include clear, measurable, enforceable provisions for implementation of LID. In our review of MS4 programs in our Region, we have found it common for permits to rely on the development of plans to achieve certain permit controls, rather than including clearly prescriptive requirements in the permits. While the permittees generally make significant and sincere efforts in their development of these plans, the plans often result in a reliance on qualitative provisions rather than specific measurable criteria. As a result, we've often found uncertainty among both the MS4 permittees and the permitting agencies as to specific permit controls. The incorporation of LID techniques into MS4 permits provides an opportunity to establish clear, measurable performance measures for the implementation of LID.

Section XII of the draft permit, entitled "New Development (Including Significant Re-Development)," appropriately sets a 5% EIA limit as a means for measuring the utilization of site controls, including LID techniques, for limiting stormwater runoff. This section of the draft permit also appropriately includes measurable requirements for controlling hydromodification by comparing post-development runoff to pre-development flows. EPA is in agreement with these permit provisions. While these approaches are not the only means available for including measurable requirements for the implementation of LID and the control of hydromodification in municipal stormwater permits to promote water quality improvements, EPA is supportive of the approaches you've chosen. We understand there is an alternative proposal to include a specific, measurable design storm volume which must be managed using LID techniques. Conceptually, we are supportive of such an approach, although we would be

---

[1] See for example the analysis prepared by Dr. Richard Horner entitled "Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for Ventura County" submitted to the Los Angeles Regional Board by NRDC.

interested in reviewing specific permit language. We would not support replacing these approaches with qualitative provisions that do not include measurable goals.

We support the concept of alternatives and in-lieu programs for LID outlined in section XII.E. However, this section should be restructured to require that these waiver programs be approved prior to their utilization. If a permittee intends to grant waivers, they should be required to first establish the water quality credit system described in section XII.E.3. Section XII.E.3 should be moved to the beginning of section XII.E (thus renumbered as XII.E.1). The permit should require that any credit system that the permittees establish must (not "should") be submitted to the Executive Officer for review and approval. Any approved alternative programs should include measurable requirements, consistent with our comments above regarding the need for clear, measurable and enforceable permit conditions. In the section which is currently section XII.E.1 (which would become XII.E.2) the first sentence should be revised to note that if a BMP is not feasible, the permittee may grant a waiver pursuant to their approved Credit System.

2. Incorporation of Total Maximum Daily Loads (TMDLs)

The permit appropriately includes the relevant TMDLs, but the permit should more explicitly state that the wasteload allocations (WLAs) established by these TMDLs are intended to be enforceable permit effluent limitations and that compliance is a permit requirement. As a general matter, it is also our view that the permit language should clarify what monitoring will be done to determine compliance with WLAs. We recognize that the permit includes several different sections which describe monitoring efforts. However, with respect to the specific TMDLs described in section XVIII, the requirements for monitoring receiving waters (and end-of-pipe monitoring for sediments) are not always clear. If required monitoring to determine compliance with WLAs is specified in existing, separate monitoring plans, these existing plans should be clearly identified. With respect to existing plans, there should be confirmation that the plans clearly identify what monitoring will be conducted, and that monitoring results will enable the Board to clearly determine compliance with WLAs. If these referenced plans have not yet been prepared, the permit should contain required plan submittal dates, along with the expectations for the content of the plans to enable the Board to determine compliance with WLAs.

To further support WLA requirements in the permit, we recommend that Finding #52 for the permit include the following statement: "NPDES regulations at 40 CFR 122.44(d)(1)(vii)(B) require that permits be consistent with Waste Load Allocations (WLAs) approved by EPA. In the case of this permit, where there are EPA-approved TMDLs for waters in Orange County, this permit must incorporate provisions consistent with the WLAs associated with municipal stormwater, aka "urban runoff," from these TMDLs."

Section XVIII.B (technical TMDLs with no implementation plans)

i. Please note that the parenthetical statement in section XVIII.B.1.c should refer to paragraph 2, not paragraphs 4 & 5.

ii. In section XVIII.B.2, the permit references the Newport Bay/San Diego Creek organochlorine (OC) compounds TMDLs adopted by the Regional Board in September 2007. Despite having been adopted by the Regional Board, these TMDLs and the implementation plan have not yet been submitted to the State Board for approval. Until they are submitted to the State Board, and in turn approved by the State Board, OAL, and EPA, they are not applicable. Rather, the permit should recognize that the EPA TMDLs adopted in June 2002 are the currently applicable TMDLs.

iii. Based on our review of the Newport Bay/San Diego Creek TMDLs, it appears that the concentrations in Tables 1A/1B do not accurately reflect the WLAs for urban runoff in EPA's 2002 TMDLs. In addition to correcting these Tables, the permit should clarify that the WLAs are intended to be enforceable effluent limits. Compliance with the WLAs could be required in accordance with the time frame envisioned by the Board's implementation plan since this would be consistent with the intent of the EPA TMDLs.

iv. This section currently requires activities (the Regional Monitoring Plan (RMP) and Toxicity Reduction and Investigation Program (TRIP)) geared toward compliance with the Regional Board's as-yet unapproved OC TMDLs. These activities are similar to those contemplated for compliance with EPA's OC TMDLs. However, it should be confirmed that the monitoring results will enable determinations regarding compliance with the approved and currently applicable EPA TMDLs. Monitoring plans must clearly identify monitoring locations, the frequency of required monitoring, and required submittal of monitoring results. As recommended by the EPA TMDL, the monitoring plan should include water column and sediment monitoring. In addition, fish tissue monitoring should be included (if not already in the existing plan) since this was identified as an important environmental indicator in EPA's TMDL.

v. The permit should include conditions consistent with the WLAs for metals and selenium established by EPA in June 2002 for Newport Bay, San Diego Creek and the Rhine Channel. The description of the selenium TMDL for Newport Bay on page 67 describes selenium as naturally occurring. However, the TMDL suggests that selenium loads are made up of both naturally occurring and anthropogenic sources. The permit's required monitoring of selenium should not be limited to sources of naturally occurring selenium. Section XVIII.B.3 of the permit mentions that revised TMDLs for selenium are being developed by the Regional Board, but until the revised TMDLs and implementation plan are approved, the WLAs from the existing TMDLs are applicable. The EPA TMDLs for selenium and metals do not include a compliance deadline, but rather suggest a phased, iterative approach for compliance with the WLAs. Consistent with the recommendations of the EPA TMDLs, we suggest the permit require the

development and submittal of a compliance plan (with an implementation schedule) to the Board by the permittees. Detailed requirements for a monitoring program to determine compliance with the WLAs, including monitoring locations, frequency of sampling, and reporting should also be required.

vi. Section XVIII.B.3 of the permit refers to the activities and plans underway for revised nutrient TMDLs. We understand that these ongoing activities are focused on revisions to the nutrient TMDL implementation plan, not the TMDLs themselves. The permit should be corrected accordingly.

vii. Section XVIII.B.3 of the permit lays out an open-ended approach to the development of a monitoring plan for selenium and nitrogen. A specific deadline for the submittal of the monitoring plan should be included in the permit.

viii. We support the approach provided for incorporating the Coyote Creek WLAs, by establishing a date certain for submittal of a source control plan and monitoring plan. The permit should clarify the monitoring plan must include the frequency of sampling, and any other details to be required in using the collected data to determine compliance with WLAs.

Section XVIII.C (TMDLs beyond the permit term)

Tables 5a and 5b (in section XVIII.C.1) contain errors in that the first two rows of each table both include, "Total Maximum Daily Load for Fecal Coliform." It appears that one of these rows should present the WLA for urban runoff. The permit should also clarify that the urban runoff WLAs are intended to be permit effluent limits; we suggest that language be added to the permit such as: "The permittees shall comply with the wasteload allocations for urban runoff in Tables 5a and 5b in accordance with the deadlines in Tables 5a and 5b."

Section XVIII.D (TMDLs with compliance schedules within the permit term)

i. The permit (section XVIII.D.1) should clarify that the diazinon and chlorpyrifos WLAs are intended to be permit effluent limits; we would suggest that language be added to the permit such as: "The permittees shall comply with the following wasteload allocations in Tables 6a and 6b." Immediate compliance should be required unless an alternate date is provided in the implementation plan. We would also recommend that the fact sheet discuss the current compliance status of the permittees with the WLAs; given the phase-out of these pesticides within urban areas, compliance may have already been achieved.

ii. Regarding the nutrient TMDLs, the fact sheet (page 9) indicates the current and future targets for nutrients are already being met. In contrast, the permit (page 71) indicates that

the *overall* allocations have been met, leaving questions about the urban runoff WLA. Recent monitoring reports submitted to the Regional Board show that the urban runoff allocations for both the total nitrogen and total phosphorus loads are not currently being met. This discrepancy should be clarified in the fact sheet. Further, the permit should be clarified to indicate that the urban runoff WLAs in the Tables 7, 8 and 9 are intended to be permit effluent limits.

iii. Regarding the Newport Bay sediment TMDL, the permit should include firm dates for the submittal of monitoring data presenting the 10-year running averages.

Section XVIII.E.2 refers to "numeric effluent limits." For clarity, and for consistency with the rest of section XVIII, we suggest this be revised to: "Based on the TMDLs, numeric effluent limits have been specified to ensure consistency with the wasteload allocations."

We appreciate the opportunity to provide our views on this draft permit. If you'd like to discuss these comments, please contact John Tinger of the NDPES Permits Office at (415) 972-3518, or Eugene Bromley of the NPDES Permits Office at (415) 972-3510.

Sincerely,

Douglas E. Eberhardt, Chief
NPDES Permits Office